What Is Claimed Is:

1. A run-in coating for gas turbines, for sealing a radial gap between a housing (11) of the gas turbine and rotating rotor blades (10) of same, run-in coating (13) being applied to the housing (11), wherein the run-in coating (13) is produced from an intermetallic titanium-aluminum material.

2. The run-in coating as recited in Claim 1, wherein the run-in coating (13) made of the titanium-aluminum material has a stepped and/or a graded material composition and/or porosity.

3. The run-in coating as recited in Claim 1 or 2, wherein the run-in coating (13) made of the titanium-aluminum material is developed to be less porous at a region facing the housing (11) than at a region facing the rotating rotor blades (10).

4. The run-in coating as recited in one or more of Claims 1 through 3, wherein the run-in coating (13) is developed to be less porous, at an inner region lying directly adjacent to the housing (11) and at an outer region lying directly adjacent to the rotor blades (10), than between these two regions.

5. The run-in coating as recited in one or more of Claims 1 through 4, wherein the ratio of titanium to aluminum within the run-in coating (13) is approximately constant, exclusively the porosity for setting a density and/or hardness and/or rigidity of the same being stepped or graded.

6. The run-in coating as recited in one or more of Claims 1 through 4, wherein the ratio of titanium to aluminum within the run-in coating (13) is also stepped or graded, the run-in coating (13) containing more aluminum at a region facing the rotating rotor blades (10) than at a region facing the housing (11).

7. The run-in coating as recited in one or more of Claims 1 through 6, wherein the run-in coating (13) made of the titanium-aluminum material is applied onto a housing (11) made of an intermetallic titanium-aluminum material.

8. The run-in coating as recited in Claim 7, wherein the run-in coating (13) made of the titanium-aluminum material is directly applied onto the housing (11) made of titanium-aluminum material.

9. A method for producing a run-in coating for gas turbines, for sealing a radial gap between a housing (11) of the gas turbine and the rotating rotor blades (10) of same, run-in coating (13) being applied onto the housing (11) using the following steps:

   a) providing a housing (11),

   b) applying the run-in coating (13) made of an intermetallic titanium-aluminum material onto the housing.

10. The method as recited in Claim 9, wherein the run-in coating (13) made of the titanium-aluminum material is applied in such a way that it has a stepped or a graded material composition and/or porosity.

11. The method as recited in Claim 9 or 10, wherein the run-in coating (13) made of the titanium-aluminum material is applied in such a way that it is developed to be less

porous at a region facing the housing (11) than at a region facing the rotating rotor blades (10).

12. The method as recited in one or more of Claims 9 through 11, wherein the run-in coating (13) made of the titanium-aluminum material is applied onto a housing (11) made of an intermetallic titanium-aluminum material.

13. The method as recited in one or more of Claims 9 through 12, wherein, in connection with step b), the run-in coating (13) is applied onto the housing (11) in such a way that, for this purpose, at least one layer of a titanium-aluminum slip material is applied onto the housing (11), subsequently, the layer or each layer of the titanium-aluminum slip material being hardened by baking.

14. The method as recited in Claim 13, wherein additives are intercalated into the layer or each layer of the titanium-aluminum slip material, theses additives being evaporated during baking, and leaving behind the pores within the layer or each layer of the run-in coating (13), in this context.

15. The method as recited in Claim 13 or 14, wherein the layer or each layer of the titanium-aluminum slip material is applied by brushing, dipping or spraying.

16. The method as recited in one or more of Claims 9 through 12, wherein in connection with step b), the run-in coating (13) is applied onto the housing (11) in such a way that, for this purpose, at least one titanium-aluminum layer is applied with the aid of a directed vapor jet, especially a PVD jet, onto the housing (11),

subsequently, the layer or each layer of the vapor jet being hardened by baking.

17. The method as recited in Claim 16, wherein shortly before the impinging of the directed titanium-aluminum vapor jet, additives are fed into the titanium-aluminum vapor jet, these additives being evaporated during baking, and leaving behind the pores within the layer or each layer of the run-in coating (13), in this context.